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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,878	10/08/2004	Johannus Wilhelmus Weekamp	NL02 0719 US	6315

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PHILIPS ELECTRONICS NORTH AMERICA CORPORATION
INTELLECTUAL PROPERTY & STANDARDS
1109 MCKAY DRIVE, M/S-41SJ
SAN JOSE, CA 95131

EXAMINER	
THAI, LUAN C	
ART UNIT	**PAPER NUMBER**
2891	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/510,878	WEEKAMP, JOHANNUS WILHELMUS	
	Examiner	Art Unit	
	Luan Thai	2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/8/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election *without traverse* of Group II, claims 1-10, filed 10/25/06, is acknowledged. Claims 11-13 are canceled.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The Information disclosure Statement filed on 10/8/04 has been considered.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 6 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson (3,024,151 of record).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 1-3, 6 and 9-10, Robinson (see specifically figure 9, Col. 3, lines 63-69 and figures 18-19, Col. 6, lines 36-68) discloses a method of manufacturing an electronic device which comprises an electrically insulating body provided with a conductor pattern at a surface, said method comprising the steps of: providing a carrier plate (20) with a first side and an opposed second side, with, starting from the first side in that order, a first layer (20) of a first mechanically deformable material and a second layer (21) of a second material different from the first (Col. 2, line 69 to Col. 3, line 9), which second material is patterned substantially in accordance with the conductor pattern (23) and is eclectically conducting; deforming the carrier plate by bending of the carrier plate (20) in at least one direction so as to enclose an angle which is substantially smaller than 180° (See Fig. 9); providing insulating material (25) at the second side of the carrier plate so as to form the electrically insulating body; and removing the first layer (20) such that the conductor pattern becomes exposed at the surface of the body (Fig. 8, Col. 3, lines 55+). Robinson further discloses that the carrier plate is pressed in from the second side of the carrier plate in desired positions by means of a die such that, after the provision of the electrically insulating material, the conductor pattern projects beyond the surface of the body in the desired positions in a direction perpendicular to the surface, an electronic element (101/102/103) is provided on or above the carrier plate, at the second side thereof, before the insulating material is provided against the carrier plate, which element is electrically connected to the conductor pattern and is surrounded by the insulating material (104) which thus acts as a passivating envelope for the electronic element and at least one electrical component is fastened to the electrically insulating body, such that connection regions of the component are connected with electrical conduction to the conductor pattern of the body (See Figs. 18-19, Col. 6, lines 36-

68). Robinson also teaches the conductor pattern (23) comprises a number of strip-shaped conductors, which are each provided with at least one region having dimensions larger than the width of the strip-shaped conductors (See Fig. 3).

6. Claims 1-2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Moran (GB 2,229,864 of record).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 1-2 and 8, Moran (see specifically figures 1-8) discloses a method of manufacturing an electronic device which comprises an electrically insulating body provided with a conductor pattern at a surface, said method comprising the steps of: providing a carrier plate (10) with a first side and an opposed second side, with, starting from the first side in that order, a first layer (10) of a first mechanically deformable material characterized in that a thickness of between 20 and 300 μm is chosen for the first layer of the carrier plate (10) and a thickness of between 3 and 20 μm for the second layer (40) and a second layer (40) of a second material different from the first (Page 5, lines 9-30, Figs. 2-3-4), which second material is patterned substantially in accordance with the conductor pattern (40) and is eclectically conducting; deforming the carrier plate by bending of the carrier plate (10) in at least one direction so as to enclose an angle which is substantially smaller than 180° (See Fig. 5); providing insulating material (60) at the second side of the carrier plate so as to form the electrically insulating body (Fig. 5); and removing the first layer (10) such that the conductor pattern becomes exposed at the surface of the body (Fig. 6, page 6, lines 11-22).

7. Claims 1-2, 6-7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Leveque et al. (4,944,908 of record).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 1-2, 6-7 and 10, Leveque et al. (see specifically figures 1-12) discloses a method of manufacturing an electronic device which comprises an electrically insulating body provided with a conductor pattern at a surface, said method comprising the steps of: providing a carrier plate (16/18) with a first side and an opposed second side, with, starting from the first side in that order, a first layer (16/18) of a first mechanically deformable material and a second layer (20) of a second material different from the first (Col. 2, line 47 to Col. 3, line 30), which second material is patterned substantially in accordance with the conductor pattern (22') and is eclectically conducting; deforming the carrier plate by bending of the carrier plate (16/18) in at least one direction so as to enclose an angle which is substantially smaller than 180° (See Figs. 1-2); providing insulating material (24) at the second side of the carrier plate so as to form the electrically insulating body; and removing the first layer (16/18) such that the conductor pattern becomes exposed at the surface of the body (Fig. 12). Leveque et al. further discloses that the conductor pattern (6/8/10/12/14) comprises a number of strip-shaped conductors, which are each provided with at least one region having dimensions larger than the width of the strip-shaped conductors (14) (See Figs. 1-2), wherein the strip-shaped conductors (14) are provided at one end with respective regions serving as connection regions, and said connection regions are placed in a closed arrangement, preferably rectangular, on a first planar surface of the insulating body (24), a number of said strip-shaped conductors extending further to a second planar surface which

encloses an angle with the first planar surface which is substantially smaller than 180° (See Figs. 1-2), and at least one electrical component is fastened to the electrically insulating body, such that connection regions of the component are connected with electrical conduction to the conductor pattern of the body (Col. 1, lines 4-55).

8. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Belke et al. (5,738,797 of record).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 1-2 and 4, Belke et al. (see specifically figures 1-2) discloses a method of manufacturing an electronic device which comprises an electrically insulating body provided with a conductor pattern at a surface, said method comprising the steps of: providing a carrier plate (10) with a first side and an opposed second side, with, starting from the first side in that order, a first layer (10) of a first mechanically deformable material, a second layer (16) of a second material different from the first (Figs. 1A-1B-1C), which second material is patterned substantially in accordance with the conductor pattern (16) and is eclectically conducting (Fig. 1C); deforming the carrier plate by bending of the carrier plate (10) in at least one direction so as to enclose an angle which is substantially smaller than 180° (See Figs. 1E-1F); providing insulating material (32/46) at the second side of the carrier plate so as to form the electrically insulating body (Figs. 1G-1H and 2); and removing the first layer (10) such that the conductor pattern becomes exposed at the surface of the body (Col. 3, lines 36+). Belke et al. further disclose the second layer (16) is patterned through a local, preferably selective removal of a portion of the second layer from the second side of the carrier plate (10) under formation of a

recess, whereupon the formation of the recess is completed by selective etching of a portion of the first layer located in the recess, during which underetching of the first layer with respect to the remaining portion of the second layer takes place (See Fig. 1D).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belke et al. (5,738,797 of record) in view of Robinson (3,024,151 of record).

Regarding claim 5, Belke et al. discloses the claimed invention as detailed above except for the strip-shaped conductors being provided with a region of larger dimensions than the width of the strip-shaped conductors.

Robinson while related to a similar method of manufacturing an electronic device teaches the strip-shaped conductors (23) being provided with a region of larger dimensions than the width of the strip-shaped conductors (see specifically figure 3). The purpose of doing so would have been helping the wire bonding process applied to the conductors easier. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to recognize that combining Robinson's process with Belke et al.'s invention would have been beneficial because it help simplify the process of bonding or electrically connecting the strip-shaped conductors and bonding wires.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan Thai whose telephone number is 571-272-1935. The examiner can normally be reached on 8:00 AM - 4:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley W. Baumeister can be reached on 571-272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Luan Thai
Primary Examiner
Art Unit 2891
December 25, 2006